Amendments to the Specification

Applicant respectfully requests ¶ [0027] of the Specification to be amended as follows:

[0027]   FIG. 3 is a chart illustrating an IF frequency shift 300 to transform a low pass filter into a bandpass filter. The transformation can be done by the variation of resistance in the BPFs 230 and 235 as derived below based on the circuits shown in FIG. 4A and FIG. 4B below. The transformation also enables IF frequency shifting to compensate for DC offset rejection and image rejection.

For a low pass filter: $\dfrac{y}{x} = \dfrac{Gain}{1 + j\dfrac{\omega}{\omega_0}}$, wherein ω_0 is the corner frequency.

For a bandpass filter: $\dfrac{y}{x} = \dfrac{Gain}{1 + j\dfrac{(\omega - \omega_c)}{\omega_0}}$, wherein ω_0 is the center frequency.

Therefore, for the channel select filter electrical equivalent 420 (FIG. 4B):

$$\frac{y}{x} = \frac{1}{j\dfrac{W}{W_0} + 1 - j2Q} = \text{Error ! Objects cannot be created from editing field 4 codes .} =$$

$$\frac{1}{1 + j\left(\dfrac{\omega}{\omega_0} - 2Q\right)} = \frac{1}{1 + j\dfrac{\omega - 2Q\omega_0}{\omega_0}} = \frac{1}{1 + j\dfrac{\omega - \omega_c}{\omega_0}}$$

Therefore,

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$$\omega_0 = \frac{1}{R_f C}$$

$$\omega_c = \frac{1}{R_x C}$$

$$Q = \frac{\omega_c}{2\omega_0}$$